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12 December 1980

# Worldwide Report

TELECOMMUNICATIONS POLICY,  
RESEARCH AND DEVELOPMENT

(FOUO 13/80)



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TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT  
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WEST EUROPE

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Briefs

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INTER-ASIAN AFFAIRS

BRIEFS

JAPAN-ROK COMMUNICATIONS--Tokyo, 13 Nov (Jiji Press)--Kokusai Denshi Denwa Co. (KDD) announced Thursday Japan-South Korea communications via submarine cable will start 28 November. KDD, Japan's international telecommunications monopoly, has laid the cable jointly with the Korean communications ministry at a total cost of 5.5 billion yen (about \$27.5 million). The 280 kilometer-long cable between Hamada, Shimane Prefecture, and Pusan is capable of carrying 2,704 circuits of telephone messages. It will increase telecommunications capacity between the two countries more than five times from the present 504 circuits via microwaves. [Text]  
[OW141201 Tokyo JIJI in English 1425 GMT 11 Nov 80 OW]

JOINT VENTURE IN BULGARIA--Tokyo, 13 Nov (Jiji Press)--Fujitsu Fanuc Ltd., a machine tool maker of the Fujitsu group, will shortly establish a joint venture in Sofia, the capital of Bulgaria, it was revealed Thursday. This is a Japanese machine tool maker's first joint venture in an East European nation. The purpose is to service numerically controlled machines sold in East European nations. The Bulgarian partner of the joint venture has yet to be announced. Fujitsu and the Bulgarian side will decide details, such as capital subscription, by the yearend. [Text] [Tokyo JIJI in English 1442 GMT 11 Nov 80 OW]

JAPAN-AUSTRALIA SCIENTIFIC COOPERATION--Tokyo, 13 Nov (Jiji Press)--Japan and Australia have agreed that "there is great room" for cooperation between the two countries in the field of science and technology in a short as well as longer term. This was made known in a joint press statement issued here Thursday after talks held 5 November and Thursday between Japanese officials, headed by Deputy Foreign Minister Kiyoaki Kikuchi, and an Australian mission, led by secretary of the science and technology department. "Further exchanges of views will take place to identify those specific subjects which will be most promising for collaboration," the statement said. "Working scientists from both countries will be involved in identifying these subjects." The working-level talks are a follow-up to a meeting between the late Prime Minister Masayoshi Ohira and his Australian counterpart Malcolm Fraser in Australia 10 months ago in which they recognized the need for a much closer relationship between the two countries in science and technology. [Text]  
[Tokyo JIJI in English 1241 GMT 11 Nov 80 OW]

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PRC-JAPAN UNDERSEA CABLE--China has asked for Japanese cooperation in opening telecommunications channels linking China to the United States, the Philippines, Australia and Hong Kong via the existing Japan-China undersea communications cable, the Posts and Telecommunications Ministry and the Kokusai Denshin Denwa Co (KDD) disclosed Tuesday. Technically speaking, the linkage could be realized as soon as agreements on charges are concluded between the countries concerned, but, under the Chinese plan, Japan will become a virtual relay station, linking China to these countries. Accordingly, the ministry is studying the request cautiously. China made the request in talks held in Shanghai between officials of China's Ministry of Posts and Telecommunications and Japan's ministry and the KDD on October 15-21. The talks concerned ensuring the normal functioning of the existing cable. Because of lack of demand, the existing submarine cable is used at far below capacity, causing considerable business losses both to China's ministry and the KDD. In addition, China said it had already spent large sums of money on repairing damage to the cable. China made the request to open new communications routes using the Japan-China cable so that better use could be made of the cable. The KDD only promised to study the request. [Text] [OW291133 Tokyo ASAHI EVENING NEWS in English 28 Oct 80 p 1]

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CZECHOSLOVAKIA

CSSR TELEVISION TRANSMITTER NETWORK

Prague TELEKOMUNIKACE in Czech No 9, Sep 80 pp 136-137

[Article by Engineer Jiri Novotny, Prague Radio Communications Administration:  
"Television Transmitter Network at End of Sixth Five-Year Plan"]

[Text] Five years have passed since our journal (TELEKOMUNIKACE, No 9, 1975) published a map of the Czechoslovak transmitter network for TV broadcasting programs 1 and 2. This issue contains an update of the TV transmitter network, and we believe that it will be just as well received by our readers as the last one.

The map shows the status as of 1 July 1980. It contains the names of all television transmitter locations (the corresponding radio communications centers or stations also bear these names) and their locations are designated by small circles. The two distinctive columns indicate transmitters of TV network broadcasting programs 1 and 2. Column height indicates maximum radiated power (ERP), and the numbers above the columns indicate the corresponding TV channel. For the sake of completeness, the map also contains three radio communications stations which are presently still under construction (Vimperk -- Marsky Mountain; Rychnov nad Kneznou -- Liticky Hill; Mikulov -- Devin), but TV broadcasting program 2 transmitters will go into operation at these locations either this year or next. In addition to the map, we have published a list of transmitters, with each entry led by the transmitter's international designation.

The map probably does not require any further explanation. If we compare it with the map published five years ago we see that the network is far denser. The total number of transmitters has increased by two thirds, and additional more or less well-known hilltops, mountaintops as well as one mountain village have been "conquered" for the sake of improving TV signal coverage over Czechoslovakia. Location names have even begun repeating -- East Slovakian Dubnik has been joined by a mountain of the same name at the opposite end of Slovakia.

Construction of required radio communications facilities is never a simple matter, and we should not forget the fact that our society is spending a great deal on such projects. There is a saying that builders prefer to build on a "green meadow." It is true that this kind of an opportunity is frequently offered in construction projects of this type, but as a rule we are dealing with a "meadow" on the top of a hill or mountain. The shortness of the suitable construction season with more or less favorable climatic conditions greatly complicates both the initial phase of construction and the completion stages, when it is possible to work under a roof,

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TV Network Broadcasting Program 1  
Transmitters (as of 1 July 1980)

Name of Location	Channel	Polarization	Power (kw)	Date Went Into Operation
<b>Praha</b>				
Cukrák	1 H	30		26. 11. 1962
<b>Praha-město</b>				
Petřín	7 H	2,5		1. 5. 1953
<b>C. Budějovice</b>				
Klet	2 H	10		1. 5. 1959
<b>Píseň</b>				
Krašov	10 H	10		9. 5. 1960
<b>Jáchymov</b>				
Klinovec	7 H	0,3		21. 12. 1957
<b>Cheb</b>				
Zelená hora	8 V	0,1		3. 1. 1970
<b>Cheb</b>				
Zelená hora	26 H	5		29. 12. 1976
<b>Domažlice</b>				
Vraní vrch	12 H	0,2		4. 9. 1979
<b>Sušice</b>				
Svatobor	9 H	0,1		23. 12. 1970
<b>Klatovy</b>				
Barák	6 H	0,3		15. 5. 1973
<b>Ústí n. L.</b>				
Buková hora	12 V/ H	10		11. 6. 1960
<b>Liberec</b>				
Ještěd	8 V	2,5		1. 5. 1959
<b>J. r. Králové</b>				
Krásná	6 H	10		1. 5. 1959
<b>Trutnov</b>				
Černá hora	11 V	0,2		17. 3. 1961
<b>Ostrava</b>				
Hoštákovice	1 H	10		31. 12. 1955
<b>Jeseník</b>				
Praděd	4 H	2		26. 3. 1980
<b>Val. Meziříčí</b>				
Radhošť	6 V	0,1		5. 2. 1968
<b>Brno</b>				
Kojál	9 H	20		1. 1. 1959
<b>J. hlava</b>				
Javořice	11 V	2,5		12. 1. 1959
<b>Gottwaldov</b>				
Tlustá hora	41 H	2		27. 10. 1979
<b>Uher. Brod</b>				
Vel. Javořina	21 H	0,8		13. 4. 1979
<b>Bratislava</b>				
Kamzík	2 H	10		3. 11. 1956
<b>N. Mesto n. V.</b>				
Vel. Javořina	12 V	0,3		1961
<b>Trenčín</b>				
Nad Oborou	10 V	0,6		6. 9. 1976
<b>Stúrovo</b>				
Modry vrch	9 V	0,1		31. 5. 1971
<b>B. Bystrica</b>				
Suchá hora	7 H	10		28. 10. 1960
<b>Poprad</b>				
Kráľova hoľa	5 H	10		10. 1961
<b>Žilina</b>				
Križava	11 V	5		23. 1. 1970
<b>Námestovo</b>				
Magurka	4 H	0,6		1. 9. 1975
<b>Ružomberok</b>				
Úložisko	9 H	0,5		24. 5. 1976
<b>Košice</b>				
Dubník	6 V	10		24. 2. 1961
<b>Bardejov</b>				
Magura	4 H	1		19. 11. 1975

TV Network Broadcasting Program 2  
Transmitters (as of 1 July 1980)

Name of Location	Channel	Polarization	Power (kw)	Date Went Into Operation
<b>Praha</b>				
Cukrák	26 H	50		6. 11. 1975
<b>Praha-město</b>				
Petřín	24 H	15		10. 5. 1970
<b>C. Budějovice</b>				
Klet	39 H	20		15. 11. 1974
<b>Píseň-město</b>				
Krkavec	31 H	20		23. 12. 1974
<b>Píseň</b>				
Krašov	34 H	5		29. 12. 1977
<b>Jáchymov</b>				
Klinovec	38 H	5		20. 12. 1973
<b>Cheb</b>				
Zelená hora	36 H	5		20. 12. 1973
<b>Domažlice</b>				
Vraní vrch	24 H	5		1. 7. 1979
<b>Sušice</b>				
Svatobor	35 H	5		1. 7. 1975
<b>Klatovy</b>				
Barák	22 H	5		3. 10. 1975
<b>Ústí n. L.</b>				
Buková hora	33 H	20		5. 12. 1975
<b>Liberec</b>				
Ještěd	31 H/ V	5		21. 9. 1973
<b>Hr. Králové</b>				
Krásná	22 H	20		19. 12. 1975
<b>Trutnov</b>				
Černá hora	23 H	20		28. 12. 1977
<b>Ostrava</b>				
Hoštákovice	31 H	20		10. 5. 1970
<b>Jeseník</b>				
Praděd	36 H	20		29. 12. 1975
<b>Nový Jičín</b>				
Vesel. kopec	34 H	5		27. 11. 1975
<b>Olomouc</b>				
Radkov	33 H	2		28. 12. 1979
<b>Frydek-Místek</b>				
Lysá hora	37 H	20		1. 3. 1980
<b>Brno</b>				
Kojál	29 H	20		22. 12. 1975
<b>Brno-město</b>				
Brno	35 H	2		26. 4. 1970
<b>Třebíč</b>				
Klučov. hora	28 H	10		18. 12. 1979
<b>Gottwaldov</b>				
Tlustá hora	22 H	5		31. 10. 1978
<b>Bratislava</b>				
Kamzík	27 H	20		14. 2. 1970
<b>N. Mesto n. V.</b>				
Vel. Javořina	39 H	20		17. 5. 1979
<b>Modrý Kameň</b>				
Spaní laz	21 H	5		22. 2. 1979
<b>Bor. Mikuláš</b>				
Dubník	37 H	5		28. 12. 1977
<b>B. Bystrica</b>				
Suchá hora	32 H	50		1. 8. 1974
<b>Poprad</b>				
Kráľova hoľa	30 H	20		28. 8. 1974
<b>Lučenec</b>				
Biatny vrch	33 H	5		21. 12. 1979
<b>Žilina</b>				
Križava	35 H	20		9. 5. 1973
<b>Námestovo</b>				
Magurka	29 H	5		30. 12. 1975
<b>Ružomberok</b>				
Úložisko	27 H	2		29. 12. 1975
<b>Košice</b>				
Dubník	25 H	50		29. 12. 1976
<b>Košice-mesto</b>				
Sjbená hora	21 H	0,2		1. 2. 1971
<b>Bardejov</b>				
Magura	37 H	5		13. 10. 1978

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but transportation to the construction site bogs down due to the fact that access roads are either difficult or impassable.

The majority of facilities requisite for growth and development of our television network are built under these conditions. The situation is no different as regards renovation, which involves either simple refurbishing of equipment, or facility upgrading and modernization. In addition to strictly utilitarian facilities, during the last five years there have also appeared some structures which are unquestionably of architectural interest, such as on Cherna Mountain in Krkonosi, at Praded in Moravia, and the popular Lysa Mountain in Bezrucov. We should mention that the first-named facility is entirely a Polish construction project; the transmitters are also of Polish manufacture, including the antennas.

The radio communications center on Kral'ova Alpine Meadow, at an elevation of 1,948 meters -- the highest of the "occupied" mountaintops, involved a difficult and demanding renovation effort. Since we have begun listing superlatives, here are a few additional statistics. The highest television channel in use, 41, is currently being utilized at the Gottwaldow Station -- Tlusta Mountain (of course TV repeaters have already "reached" Channel 51; TV broadcasting program 2 of Czechoslovak Television is being received on Channel 51 by viewers in and around Plzen). Another first goes to the TV Program 1 transmitter on Bukova Mountain, which employs elliptical carrier wave polarization. It is true that for the time being this is an experiment, conducted in cooperation with the Prague Communications Research Institute. The evaluation has not yet been completed, but preliminary results are promising.

In the category of television antenna support height, the Kojal radio communications center tower, with its height of 323 meters, is still leading. Next year, however, a higher tower will be erected at Krasov, replacing one which experienced an accident at the beginning of 1979. In the final analysis this unfortunate occurrence is one of the most serious events of the last five years. The fact is, however, that this represents merely a small minus on the balance sheet of successes which radio communications have achieved during the growth, development and renovation of the television transmitter network, for the benefit of more than 4 million television set owners in Czechoslovakia.

In conclusion it would be appropriate at least to mention the existence of the lowest-power transmitters, which are TV repeaters. Last year they reached a total of more than 1,000, and this number is steadily growing, increasing practically every week. The significance of individual repeaters is definitely local, although they are certainly of great importance to owners of TV sets whose reception depends on this equipment. It would be more a matter of interest than utility, however, to draw up and print a map of repeaters, nor would our magazine's two-page format permit it. Therefore we shall merely state that the network of TV repeaters importantly supplements the network of transmitters and that both Radio Communications Administrations devote just as much attention to their development and renovation as to the TV transmitter network discussed in this article.

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INTER-AFRICAN AFFAIRS

BRIEFS

KINSHASA-BRAZZAVILLE LINK--As has been reported, a telephone-telegraph connection was put into service on 2 October between Kinshasa and Brazzaville by line of sight transmission. This link is within the framework of the Pan-African Telecommunications Network (PANAFTEL) plan and it is the first of its kind which now includes Zaire. Its eventual capacity will be 120 telephone lines and 24 telegraph lines. At present, it has only up to 60 telephone lines and 6 telegraph lines. It will be both manually and semi-automatically operated. [Text] [Paris MARCHES TROPICAUX ET MEDITERRANEENS in French 14 Nov 80 p 3041]

MOZAMBIQUE-MALAWI TELEPHONE LINE--Work on the construction of the telephone line between Mozambique and Malawi (Beira-Blantyre) is being completed. In connection with this project, a new system of automatic communication (12 networks) between the two cities has started operating. The old system, which often suffered cuts, was in dire need of replacement. The improvement will contribute to the expansion of trade relations between Mozambique and Malawi. [Excerpt] [Paris MARCHES TROPICAUX ET MEDITERRANEENS in French 24 Oct 80 p 2634]

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BURUNDI

BRIEFS

GROUND STATION--Officials of the Burundi National Telecommunications Office (Onatel) announced on 25 September that the new ground telecommunications station in Bujumbura will be operational next November. Operational tests, it was stated by the same source, will be carried out very shortly and the station will be able to begin operation only after approval by Intersat. In the beginning, there will be eight circuits linking Burundi directly to Kenya and France. The Onatel officials stated that the station's maximum capacity will be 24 circuits. The cost of this ground station is 200 million Burundian francs (about 9,400,000 French francs). [Text] [Paris MARCHES TROPICAUX ET MEDITERRANEENS in French 3 Oct 80 p 2432] 9434

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TANZANIA

BRIEFS

NEW AUTOMATIC TELEPHONE EXCHANGE IN TABORA--The Tanzanian Posts and Telecommunications Organization has announced that a new 1,800 line automatic telephone exchange will be installed in Tabora to replace the present congested one which has only 600 lines. A Japanese loan obtained early in 1980 will permit these new installations to be carried out. [Text] [Paris MARCHES TROPICAUX ET MEDITERRANEENS in French 17 Oct 80 p 2563]

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FRANCE

BRIEFS

SECURE COMMUNICATION FACILITIES--The Syracuse system will permit Valery Giscard d'Estaing to remain in constant communication with the nation's warships at sea. The navy has decided to finance the purchase of some 20 stations, transportable by ship, that will relay the Telecom-1 VHF satellite communications. Telephone and telegraph messages, encoded and protected against jamming, will be secure. A ship thus equipped will be able to remain in constant touch with the president's office while the ship is anywhere in a zone stretching from the Antilles to Reunion Island. [Text] [Paris VALEURS ACTUELLES in French 10 Nov 80 p 31]

NEW RADIO TRANSMITTER--Paris will get a new radio broadcasting station in December: Radio FM, for the enjoyment of the 20 to 40-year-old group. Paris already has Rodio 7, operated by Radio-France for the young set, and a pirate transmitter, Radio-Ivre. [Text] [Paris VALEURS ACTUELLES in French 3 Nov 80 p 23]

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END

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